

LIGO Review of ‘Compliance to LIGO Modification on GS-13’
LIGO C0900025-v1
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This is a review of the document ‘Compliance to LIGO Modifications on GS-13’ by David McClung of Geotech, dated Feb 23, 2009, for the modifications which LIGO requested for the GS-13s to be used for the Advanced LIGO HAM and BSC seismic isolation systems.

The Geotech document looks very good.

Three issues are immediately called out:

A) Geotech would like to remove the bubble level from the horizontal GS-13s.

Yes – please remove the bubble levels from the horizontal units, thanks for noticing this.

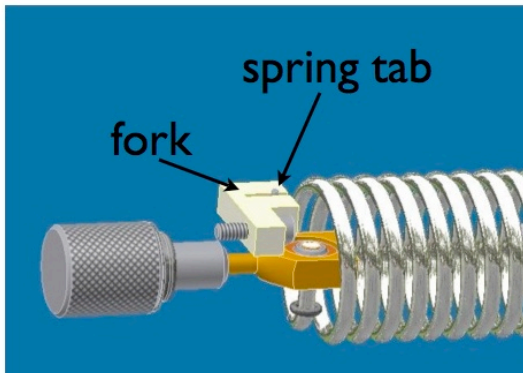
B) Geotech would like to return to the welded case, instead of the dip-brazed case.

OK - The welded case is fine. LIGO does not have an inherent preference for welded vs dip brazed. We expect that the finished case will meet the Geotech specs for dimensional tolerances, etc.

C) Are the 3 assumptions made by Geotech regarding the inspections are correct?

Inspection (b): Yes – LIGO is referring to the torsion bar shown.

Inspection (c): NO, LIGO is referring to the tab shown below, which keeps the top of the spring from rotating as the tensioning knob is adjusted. For the vertical units, the tab should be in the slot. Note that since the horizontal units have neither the tab nor the fork, this inspection does not apply to the horizontal units.



(drawing courtesy of Geotech)

Inspection (e): Yes, these parts will not be present in the horizontal units, so this inspection is not necessary.

All of the modifications described by Geotech look good and meet with our approval. As a note, the new solid top and bottom which remove the unnecessary holes look great.